

METHOD FOR PREDICTING LIFE-AFFECTING DAMAGE ON A ROTARY MEMBER

Abstract

Method and arrangements for predicting life-affecting damage on a rotary member subjected to repeated loading during operation.

A number of operating parameters are measured, and a temperature increase during each loading is calculated from the operating parameters. More precisely, a total temperature in a part of the rotary member is calculated for each loading by summation of basic temperature of the rotary member before the loading concerned and the temperature increase, and the values for the total temperature are used as a measure of the damage. The part of the rotary member for which the total temperature is calculated defines a surface that is acted on when the rotary member is loaded. Two sets of predetermined functions (M, N), which each comprise at least one function, are used for temperature-increase calculation, and the set which is used for temperature-increase calculation is selected depending on at least the nature of the rotary member.